

# Nomenclature in Palaeopathology

Keith Manchester. Alan Ogden. Rebecca Storm

Biological Anthropology Research Centre, Division of Archaeological Sciences, University of Bradford.

## ADVISORY PANEL

Joel Blondiaux, Anthea Boylston, Megan Brickley, Jo Buckberry, Jane Buikstra, MaryAnn Hardy, Christopher Knüsel, Niels Lynnerup, Simon Mays, Piers Mitchell, Charlotte Roberts, Sébastien Villotte

## OBJECTIVES

To establish and define terms for descriptive use in osteological, radiological and palaeopathological recording and in clinical interpretation in palaeopathology.

## FORMAT

Structural format is based on Terminologia Anatomica 2<sup>nd</sup> Ed.1998.

## CONTENT

### General

Prefix, suffix relevant to palaeopathology

### Part 1

Dictionary format consisting of complete list of terms, alphabetically arranged, numerically classified, and defined.

### Part 2

Terms defined and numerically assigned in Part 1 (pages 4-36) are classified and categorised numerically into their most common and appropriate, but not exclusive, usage, as follows:

1. General terms
2. Systemic and functional anatomy and physiology.
3. Systematic anatomy, (general terms), bones
4. Systematic anatomy, (general terms), joints
5. Systematic anatomy, (general terms), muscles
6. Systematic anatomy, (general terms), cardiovascular
7. Systematic anatomy (general terms), lymphoid
8. Systematic anatomy, (general terms), neural
9. Pathological
10. Clinical
11. Radiological
12. Taphonomic

## LANGUAGE

English (Classical spelling).

**TEXTS CONSULTED**

Terminologia Anatomica. 2<sup>nd</sup> Edition. 1998.

BARC MSc course Handbook

Jane Buikstra Taphonomy Glossary (pers comm)

D.B. Burr and M.R. Allen (Ed): Basic and Applied Bone Biology. 2015.

Gray's Anatomy. 1954.

Donald J.Ortner: Identification of Pathological Conditions in Human Skeletal Remains. 2<sup>nd</sup> Edition.2003.

Charlotte Roberts: Human Remains in Archaeology: a Handbook. 2009.

R.S.C. Cotran, V. Kumar, S.L. Robins: Robins Pathologic Basis of Disease. 1989.

R.L. Souhami and J. Moxham: Textbook of Medicine. 4<sup>th</sup> Edition.2004.

John Raynes: Lecture notes on inflammation. 2015. London School of Hygiene and Tropical Medicine.

J.C.E. Underwood and S.S Cross (Ed): General and Systematic Pathology. Edition. 2009.

Oxford Concise Medical Dictionary 8<sup>th</sup> Ed.

Online Medical Terms, prefix and suffix.

Shorter Oxford English Dictionary.1978.

WebMD

PubMed.

**GENERAL EXCLUSIONS**

As the purpose of this publication is to define descriptive terms, specific systematic anatomical terms, diagnostic terms and names applied to specific diseases are not included. For these, refer to the following texts:

Terminologia Anatomica.

Gray's Anatomy.

International Nomenclature of Diseases.

International Classification of Diseases.

Resnick,D, and Niwayama,G. 1995. Diagnosis of bone and joint disorders

Also Excluded: Colloquial terms

Eponyms and Latin terms

**GENERAL TERMS RELEVANT TO PALEOPATHOLOGY**

<u>Prefix</u>	<u>Suffix</u>
A, an- absence or loss of	-aceous: having the qualities of
Ab- away from	-ectomy: surgical removal of an organ
Ad- towards	-itis: inflammation of
Ante- before	-ology: study of
Anti- opposite to	-oma: neoplastic-
Apo- away from	-osis: non-inflammatory abnormality
Auto- self	-oxia: referring to oxygenation
Circum- around	-pathy: disease of
Dys- abnormality, impairment of function	-plasia: referring to cellular growth and characteristics
Extra- outside, in excess of	-trophy: referring to tissue size
Hemi- half	
Hyper- increased	
Hypo- decreased	
Inter- between	
Intra- within	
Intro- into	
Juxta- adjacent to	
Meta- in the middle	
Neo- new	
Palaeo- ancient	
Pan- all	
Para- beside	
Peri- around (at the margin/around the time)	
Post- after	
Pre- before	
Pro- before	
Retro- behind (spatial)	
Semi- half	
Spondyl- pertaining to a vertebra	
Sub- beneath	
Super- beyond	
Supra- above	
Syn- together	

Trans- across

Ultra- beyond

**PART 1: LIST OF TERMS (SEE PAGE ONE FOR NUMERICAL CATEGORIES)**

**A**

- 2. Abduction: Movement of a limb away from the midline of the body.
- 5. Abductor muscles: Muscles facilitating abduction.
- 1. Abnormal/abnormality: A bodily structure or function that is not normal.
- 10. Abortion: Naturally occurring spontaneous (i.e. non therapeutic) termination of a pregnancy before 24th week of gestation. Cf. induced abortion.
- 12. Abrasion: Abnormal rubbing or scraping action that creates surface wear.
- 9. Abscess: A localised collection of pus and necrotic tissue, developing during an inflammatory reaction.
- 2. Absorption: The uptake of substances into or across tissues.
- 2. Acoustic: Pertaining to the sense of hearing.
- 10. Acquired: An abnormality or characteristic developing after birth that is not due to heritable causes.
- 10. Acute: A disease of rapid onset and short duration.
- 2. Adduction: Movement of a limb towards the midline of the body.
- 5. Adductor muscles: Muscles facilitating adduction.
- 9. Adenocarcinoma: A malignant neoplasm of glandular or secretory epithelium.
- 9. Adhesion: The pathological union, by connective tissue, of two or more bodily surfaces that are normally separate and discrete.
- 12. Adipocere: Insoluble residue of fatty acids from fats in decomposing faunal (including human) remains.
- 1. Adolescence: The stage of development between childhood and adulthood.
- 2. Adsorption: The action of a body or tissue in attracting and holding foreign particles on its surface.
- 1. Adulthood: Having attained full maturity.
- 1. Aerobic: Microorganisms that require free oxygen for survival.
- 10. Aetiology: The causative factors in a specific disease.
- 8. Afferent nerve: Nerve fibres that convey nerve impulses from sensory receptors to the spinal cord and brain.
- 9. Agenesis: Absence of a limb element or organ due to failure of embryonic development.
- 9. Aggressive: A pathological process that is of rapid pathogenesis, and spread.
- 2. Agonist: A muscle that is opposed in action by another muscle.
- 2. Ala: A wing-like structure.
- 2. Alimentary tract: The digestive tract running from the mouth to the anus.
- 2. Alveolus: a) A small cavity, pit, or hollow.  
b) The bony socket for the root of a tooth.
- 9. Amelia: Total absence of one or more limbs due to failure of embryonic development.

2. Ameloblast: A cell forming dental enamel.
4. Amphiarthrosis: A normal union of two bony surfaces separated by fibrocartilage or hyaline cartilage with limited mobility.
10. Amputation: Accidental or intentional removal of part or whole limb, or other bodily external organ.
10. Anaemia: Reduction in the quantity of haemoglobin, the oxygen carrying component of blood.
1. Anaerobic: Microorganisms that do not require free oxygen for survival.
10. Anaesthesia: Loss of sensation in a part or whole of the body, due to sensory nerve dysfunction caused by disease or therapeutic procedure.
10. Analgesia: Reduced sensibility to pain, due to sensory nerve dysfunction caused by disease or therapeutic procedure.
9. Anaplasia: Absence of differentiating biological characteristics of normal cell type.
2. Anastomosis: A natural connection between two tubular structures.
2. Anatomical position: The standard position of the body from which all directions and positions are derived: standing erect body, feet together, arms to the sides, palms facing forwards, head and eyes facing forward.
1. Anatomy: The study of the form and structure of the body.
9. Aneurysm: A permanent localised abnormal dilatation of an artery, vein, or part of a heart.
9. Angiogenesis: The formation of new blood vessels, as occurs in wound healing and in many neoplasms.
1. Anisotropy: Unequal physical properties of materials in which the distribution of the base material causes differing strain levels depending on the direction from which a load is applied.
9. Ankylosis: Complete or partial fixation of a joint by osseous or fibrous union of the bones of a joint due to disease, injury or surgical procedure.
1. Annular: a) Ring pattern.  
b) Encircling the circumference of a hollow tube.
1. Anomaly: A non-pathological deviation from normal structure.
9. Anoxia: Deprivation of oxygen supply to tissues caused by inadequate oxygenation of blood.
2. Antagonist: A muscle in which the action of counteracts the action of another specified muscle.
10. Ante-mortem: Before death.
10. Antenatal: Before birth.
10. Antepartum: Occurring before the onset of labour.
2. Anterior: Defining the front part of the body, limb or organ.
2. Anteroinferior: Defining the front and lower part of the body, limb or organ.
2. Anterolateral: Defining the front and that part of the body, limb or organ that is away from the midline.
2. Anteromedial: Defining the front and that part of the body, limb or organ that is towards the midline.
2. Anteroposterior: From front to back.
2. Anterosuperior: Defining the front and upper part of the body, limb or organ.
2. Anteversion: Turning forward, inclining forward as a whole without bending.

1. Anthropology: The study of humankind.
10. Antibiotic: A substance produced by or derived from a microorganism that destroys or inhibits growth of other microorganisms.
2. Antibody: A specialised protein in the blood, synthesised in lymphoid tissue in response to a foreign invading protein, or in abnormal response to normal body protein, and engaged in immunological reactions.
2. Antigen: A protein that binds with an antibody in an immunological reaction.
10. Antiseptic: a) Opposing sepsis, putrefaction or decay.  
b) Preventing or arresting the growth of microorganisms.
1. Antisymmetry: Occurs when asymmetry is present but varies in which side it predominantly occurs.
3. Antrum: A normal cavity within the substance of a skeletal structure.
2. Apatite: An inorganic mineral composed of calcium and phosphate that is found in bones and teeth.
1. Apex: a) The pointed end of a conical part.  
b) The top of a body or organ.
1. Apical: Pertaining to the peak or summit of a structure.
9. Aplasia: Failure of development of an organ or tissue.
5. Aponeurosis: A sheet of fibrous tissue emanating from a muscle, with attachment to bone.
3. Apophysis: A protuberance of bone to which a tendon is attached.
2. Apoptosis: A normal process of cell death occurring in the foetal development of bodily structures, and in renewal of cells, tissues and organs.
2. Appendicular: Refers to the four limbs.
2. Appendicular skeleton: Refers to the upper and lower limbs, including the hands and feet.
1. Apposition: A normal state of two or more bodily structures becoming in close contact.
1. Archaeobotany: The study of ancient plant remains.
- 1 Archaeology: a) The study of past human life and culture by the recovery and examination of material evidence, such as human, plant and animal remains, artifacts, monuments and inscriptions.  
b) The material evidence from archaeological sites.
1. Arcuate: Arching or bow-shaped.
6. Arterial: Pertaining to an artery.
6. Arterial plexus: An interconnecting arterial network in a specific organ or anatomical site.
9. Arteritis: Inflammation of arterial wall.
6. Arteriole: Small branch of an artery leading into a capillary.
6. Artery: Blood vessel carrying blood away from the heart.
10. Arthralgia: Pain in a joint.
9. Arthritis: Inflammation in a joint.
1. Arthrology: Study of the joints and ligaments of the body.
9. Arthropathy: Any disease or disorder of a joint.
4. Articular: Pertaining to a joint.

- 4. Articular capsule: The fibrous tissue that envelops a joint.
- 4. Articular cartilage: That which covers an articular surface in a joint.
- 4. Articular fossa: The concave component of a joint.
- 4. Articular surface: The contacting surfaces of bony structures that participate in a joint.
- 4. Articulation: The point of contact between two bones in a joint.
- 9. Aseptic: Absence of infecting pathogen.
- 9. Aseptic necrosis: Tissue death in the absence of an infecting pathogen.
- 1. Asymmetric: An absence of symmetry, a lack of proportion between parts of a bilateral structure.
- 1. Asymmetry: Lack of equality between bilateral parts or aspects of a body or organ.
- 10. Ataxia: An abnormality of gait and/or uncoordinated limb movements, due to dysfunction of the central nervous system in the regulation of body posture and the strength and direction of limb movements.
- 9. Atresia: Embryological failure of formation of the lumen of a normally hollow viscus or duct.
- 9. Atrophy: A decrease in the normal size of an organ or tissue.
- 9. Attrition: Wearing of dental surfaces due to the action of opposing teeth.
- 1. Atypical: Not corresponding to the normal form or type of a structure.
- 2. Auditory: Pertaining to hearing.
- 2. Auricular: Pertaining to the ear.
- 10. Autopsy: Post-mortem dissection of the body, and ancillary investigations, to determine the cause of death.
- 9. Autoimmune: An abnormal immunological reaction to normal protein constituents of the body.
- 8. Autonomic nerve: A part of the peripheral nervous system that is responsible for control of involuntary functions.
- 9. Avascular: An absence of arterial and venous circulation to an organ or tissue.
- 9. Avascular necrosis: Death of tissue due to a deprivation of arterial blood supply.
- 9. Avulsion: Tearing or forcible disruption of a part of an organ or structure.
- 2. Axial: Pertaining to the longitudinal axis of the body.
- 3. Axial skeleton: Refers to the skull, vertebral column, pelvic bones, scapulae, clavicles, sternum and ribs.

## **B**

- 10. Bacteraemia: Presence of bacteria in the blood stream.
- 4. Ball and socket: A joint in which a partially spherical bone lies within a socket, allowing multidirectional movement and rotation. Cf. spheroidal joint.
- 9. Ballistic traumatic lesions: Lesions caused by glancing or penetrating high velocity objects.
- 2. Basal: Referring to the base of a tissue or organ. Cf. basilar.
- 2. Basilar: Cf. basal.
- 1. Benign: A non-life-threatening condition.
- 9. Benign neoplasm: Non-invasive and non-metastasising tumour.

1. Bevelled: Slanting or sloping edge of a structure.
1. Bifid: Cleft in two parts.
1. Bilaminar: A structure composed of two layers.
1. Bioarchaeology: The study of any biological remains from archaeological sites, placed in their archaeological context.
1. Biochemistry: The study of chemical substances occurring in living organisms.
9. Bioerosion: A biological erosion of tissues.
1. Biological population: A group of organisms, the basis of analysis and of evolution.
1. Biomechanics: The study of mechanical laws pertaining to the movement or structure of living organisms.
1. Biopsy: The removal of tissue for pathological examination.
12. Bleach: Chemically or physically induced whitening of a substance.
9. Blunt force lesion: Lesions caused by impact of blunt objects.
2. Bone: The dense mineralised connective tissue that forms the skeleton.
3. Bone marrow: Erythropoietic, fatty and connective tissue contained within the interior cavity of a bone.
3. Bone matrix: The intercellular substance of bone in which other structures are embedded.
12. Bore: Hole made by boring or drilling.
3. Boss: Rounded prominence of the frontal or parietal bones in an infant or adult cranial vault.
1. Bowing: Curvature of a longitudinal bone caused by bone remodelling in response to axial force.
2. Brachial: Pertaining to the upper arm.
9. Break: A discontinuity of bone structure caused by force.
10. Bunion: Localised swelling of the first metatarsophalangeal joint.
9. Burn: Tissue damage caused by exposure to excessive heat.
4. Bursa: A small sac of fibrous tissue lined with synovial tissue and filled with synovial fluid, occurring where bodily structures move over one another, thereby reducing frictional damage to those structures.
9. Bursolith: A calcification within a bursa.
12. Butchering: Post-mortem cutting and dismemberment of a body or part.

## C

10. Cachexia: Extreme wasting of the body, usually associated with advanced malignant disease.
1. Calcification: The process of deposition of calcium salts in bodily tissue.
1. Calcitonin: A hormone produced by the thyroid gland that lowers the levels of calcium and phosphate in the blood.
9. Calculus: a) A dense mineral mass formed within bodily organs e.g. Renal, gall bladder, salivary glands.  
b) Plaque mineralised with calcium phosphate.
9. Callus: New immature (woven) bone formed around the fractured ends of bone, part of the healing process.
2. Canaliculus: A small channel or duct.

- 3. Cancellous bone: Cf. trabecular bone, spongy bone.
- 9. Cancer: A term in general usage referring to any malignant neoplasm.
- 6. Capillary: A unicellular-walled narrow blood vessel arising from arteriole and draining into venule.
- 2. Capsule: A sheath of connective tissue enveloping an organ or structure.
- 10. Carcinogen: A substance or agent that may stimulate malignant change in tissue.
- 9. Carcinogenesis: Mechanisms in the causation of malignant neoplasms.
- 9. Carcinoma: A malignant neoplasm arising in epithelial cells.
- 2. Cardiovascular: Pertaining to the heart and blood vessels.
- 9. Caries: a) Decay and destruction of the mineralised structure of teeth. NB. Dental caries is a generic term and not the name of a specific lesion i.e. a lesion is not "a caries" but is described as a carious lesion.  
b) Decay and destruction of the surface of cortical bone e.g. Caries sicca in treponemal disease.
- 2. Carpus: Pertaining to the wrist.
- 3. Cartilage: Dense connective tissue produced by chondroblasts.
- 9. Caseation: Necrotic process in the centre of chronic inflammatory lesions in tuberculosis, producing an amorphous mass of cheese-like consistency.
- 8. *Cauda equina*: The nerve roots from the lumbar, sacral, and coccygeal spinal nerves that emanate from the distal end of the spinal cord and descend to exit through the corresponding vertebral foramina.
- 2. Caudal: Situated toward the distal or inferior end of the body in humans and toward the posterior/tail in animals.
- 9. Cavitation: The process of formation of a cavity within tissues or organs.
- 2. Cavity: a) An enclosed hollow within the body.  
b) A hole in a tooth caused by dental caries.
- 9. Cellulitis: Diffuse acute inflammation of skin and subcutaneous tissue caused by pathogenic organisms.
- 2. Cementoblast: A cell between fibres on the surface of cementum that is active in formation of cementum.
- 3. Cementum: A layer of calcified tissue on the surface of a tooth root, giving attachment to the periodontal ligament.
- 2. Central: In the centre of a body, tissue, or organ.
- 8. Central nervous system: Pertaining to the brain and spinal cord.
- 2. Cephalad: Towards the head.
- 2. Cephalic: Pertaining to the head.
- 8. Cerebrospinal: Pertaining to or affecting the brain and spinal cord.
- 2. Cervical: Pertaining to the neck and to the cervix of the uterus.
- 12. Charred: Tissue damage caused by extreme heat.
- 12. Chewed: Tissue damage caused by mastication.
- 9. Chondritis: Inflammation of cartilaginous tissue.
- 2. Chondroblast: A cell producing the matrix of cartilage.
- 2. Chondroclast: A cell causing resorption of cartilage.

- 2. Chondrocyte: Inactive chondroblast within cartilage matrix.
- 2. Chondrogenesis: The process of cartilage formation.
- 2. Chromosome: A threadlike structure in the nucleus of cells, containing DNA.
- 10. Chronic: A disease of long duration and usually gradual onset.
- 9. Cicatrisation: The process of scar formation.
- 1. Circadian: A repetitive pattern or fluctuation with a 24 hour cycle.
- 2. Circumduction: Limb movement in a circular rotation.
- 1. Circumferential: Around the periphery.
- 2. Cleft: A partial or complete division, either congenital or acquired, within a tissue or organ.
- 10. Clinical features: The subjective symptoms presented by a patient, and the objective physical signs demonstrated by physical examination.
- 9. Cloaca: A pathological channel providing drainage through the bone cortex to the exterior of the bone.
- 9. Clot: Semisolid mass of coagulated constituents of blood occurring in extravascular accumulations of blood (haematoma) *in vivo*, and within the cardiovascular system post-mortem. Cf. thrombus.
- 1. Cluster: A gathering together of discrete objects.
- 1. Coagulation: The process by which a colloidal liquid changes to a semisolid mass.
- 1. Coalesce: Two or more structures progressively joining together to form a single unit.
- 2. Collagen: Protein constituent of connective tissue.
- 10. Coma: A state of prolonged unconsciousness, including a lack of response to stimuli.
- 1. Commingle: Blending or mixing structures together.
- 9. Comminuted fracture: A fracture in which the bone is broken into more than two pieces.
- 10. Communicable disease: An infectious disease spread through direct contact with an infected person.
- 10. Comorbidity: Two or more co-existing diseases in an individual.
- 3. Compact bone: The non-cancellous part of bone that consists of concentric lamellar osteons and interstitial lamellae. Cf. Lamellar bone.
- 9. Compound fracture: A fracture that is complicated by open communication between the fractured bones and the external skin surface.
- 9. Compression: Structures that are pressed or squeezed together.
- 9. Compression fracture: A fracture in which the cortical surfaces of the bone are compressed together with partial or complete collapse of the internal structure of the bone.
- 10. Conception: The union of egg and sperm.
- 1. Concomitant: Two or more co-existing conditions.
- 10. Concussion: An injury to the brain, usually by violent blow or impact, and followed by temporary loss of function.
- 3. Condyle: A rounded protuberance at the ends of some bones forming a joint surface.
- 4. Condylloid joint: A joint in which an ovoid head of one participating bone moves in an elliptical cavity of another.

1. Confluent: The progressive joining together of two or more discrete lesions or structures.
10. Congenital: A condition that is manifest at birth or if manifest postnatally, is considered to have been present at birth and attributable to events in utero.
2. Connective tissue: The protein based tissue that supports, binds, or separates specialised tissues and organs.
9. Consolidation: A term applied to solidification of lung tissue by inflammatory exudate, and a feature of pneumonia.
10. Contagious: An infective disease transmitted by direct contact with the pathogen.
2. Contraction: a) Shortening of muscle in response to motor nerve impulse.  
b) Pathological reduction in size of a tissue or organ.
9. Contracture: Deformity caused by abnormal shortening of muscles.
2. Contralateral: Pertaining to, situated on, or affecting the opposite side.
9. Contracoup: An injury or fracture occurring in a part of a structure or body that is on the opposite side of that structure or body to that struck by force.
2. Coronal: a) Pertaining to the crown of the head.  
b) A lateral plane through the body.  
c) The cranial suture running laterally.
2. Corpus: Pertaining to a body.
12. Corroded: Post-mortem disintegrated cortical bone caused by chemical action.
2. Cortex: The outer part of a tissue or organ, immediately subjacent to the enveloping capsule or membrane.
2. Cortical: Pertaining to the outer part of an organ.
2. Cortical bone: Layer of compact bone surrounding the medullary cancellous bone.
9. Cortical defect: A pathological or developmental disruption of the cortical surface or cortical matrix.
9. Cortical thickening: Pertaining to an abnormal thickening of the cortex of a structure.
12. Cracked: A partial break of bone caused post-mortem by external action, desiccation or heat.
3. Cranial: Pertaining to the cranium.
8. Cranial nerves: The 12 pairs of nerves that arise directly from the brain and leave the skull through separate foramina.
3. Cranial ossicles: A bone developing within a cranial suture. Cf. Wormian bones.
10. Craniotomy: Surgical opening of the skull.
9. Crater: A saucer-shaped circular pathological depression or erosion with raised margins, of the cortical surface of bone.
12. Cremation: The process of destruction of the body by burning.
1. Crenulated: Having a finely notched or serrated outline.
2. Crest: A sinuous ridge. Cf. crista.
2. Crista: Cf. crest.
1. Cruciate: Cross-shaped.
1. Crush: A compression caused by force applied to one or both sides of a tissue or organ.

- 2. Cutaneous: Pertaining to the skin.
- 9. Cut mark: A division of tissue caused by sharp force trauma.
- 2. Cyst: A sac or closed cavity lined with epithelium, within a tissue or organ, and containing liquid or semi-solid matter.
- 2. Cytokine: A small protein that is released from cells and that has a specific effect on the interactions between cells, and is involved in inflammatory reactions.

## **D**

- 9. Dactylitis: Inflammation of a toe or finger.
- 9. Decalcified: Bone or tooth from which calcium salts have been removed.
- 12. Decay: Decomposition of organic matter due to the action of microorganisms.
- 12. Decomposition: Disintegration of dead organic matter.
- 9. Defect: A localised qualitative or quantitative deficiency of morphology or function of a tissue or organ. It may be congenital or acquired.
- 9. Deficiency: The absence or diminution of a specific substance or structure of the body.
- 1. Deform: To change the normal morphological feature of an organ or structure.
- 9. Deformation: a) A congenital or acquired morphological abnormality of a tissue or organ.  
b) An induced alteration of shape.
- 9. Deformity: The result of deforming or deformation.
- 9. Degeneration: The pathological deterioration and loss of function of cells of a tissue or organ.
- 9. Degradation: The diminution or loss of a specific tissue or organ with consequent dysfunction.
- 1. Demography: The study of populations on a national, regional, or local basis, in terms of age, sex, and relating patterns of age at death and biological sex with other variables including disease and migration, but also the wider archaeological context of the population.
- 1. Dense: Having the constituents of a structure closely compacted together.
- 1. Density: The qualitative assessment of the dense nature of a structure or substance.
- 10. Dentalgia: Pain in or about a tooth.
- 3. Dental pulp: The soft innermost part of a tooth.
- 1. Denticulate: Toothed or serrated.
- 3. Dentine: The main component of tooth structure, containing approximately 75% mineral salts.
- 9. Deposit: Extraneous mineral or organic substance laid down upon or within a tissue or organ during a pathological process.
- 2. Depression: a) A hollow in the surface of a bone.  
b) Moving in an inferior direction.
- 2. Dermis: The sensitive connective tissue layer of the skin subjacent to the epidermis.
- 12. Desiccate: To dry out.
- 1. Destruction: A process that leads to a loss of substance.

1. Develop: The process of formation of a structure or organ.
1. Developmental: Pertaining to the normal process of tissue or organ growth.
9. Developmental condition: An abnormal state due to faulty development that is not congenital in origin.
9. Deviation: An abnormal departure from the normal form.
2. Dexter: Pertaining to the right side.
2. Dextrad: Towards the right.
2. Dextrosinister: Right to left side of the body.
12. Diagenesis: The chemical processes occurring in bone post-mortem.
10. Diagnosis: The identification of the specific nature of a disease.
9. Diagnostic: Pertaining to a diagnosis.
9. Diapedesis: The migration of cells through capillary walls into tissue spaces, particularly during the inflammatory process.
3. Diaphysis: The shaft of a long bone.
4. Diarthrosis: Cf. Synovial joint.
2. Diastema: a) An abnormal space, fissure, or cleft in a body structure or organ.  
b) A gap between the teeth.
10. Diathesis: A higher than average tendency to develop allergies, rheumatic diseases or gout: not-inherited.
10. Differential diagnosis: The range of diseases of similar clinical or pathological presentation. Differential diagnoses need to be considered if stating a definitive diagnosis.
2. Differentiation: a) The embryological process by which tissue develops specific characteristics.  
b) The degree of morphological resemblance of neoplastic cells to the parent tissue.
1. Diffuse: Affecting tissues in a continuous or widespread distribution.
9. Dilatation: The pathological expansion or enlargement of a hollow organ, cavity, or lumen of a duct or blood vessel.
2. Dilation: A temporary physiological increase in the lumen of a duct or blood vessel.
3. Diploë: The trabecular structure between the inner and outer tables of the skull.
1. Directional asymmetry: Asymmetry that occurs when development of one side of a bilateral structure is favoured over the other.
9. Disability: Loss or restriction of functional ability or activity due to pathological impairment.
2. Disarticulated: The separation through a joint, of component bones into discrete elements.
12. Discoloured: A colour change from the normal.
9. Discrete: A pathological lesion that is physically distinct and separate from other related lesions.
10. Disease: A disorder of structure or function of the body that produces specific symptoms and physical signs, and that is not caused by physical injury.
9. Dislocate: The process of dislocation.
9. Dislocation: The displacement from the normal juxtaposition of opposing bones comprising a joint, to a position in which there is a complete absence of contact of articular surfaces.

- 9. Disorder: An abnormal functioning of a part of an organism.
- 9. Disorganised: A derangement of the normal morphology of constituents of tissues or organs.
- 1. Disperse: To spread objects over a wide area.
- 1. Disruption: A disturbance that interrupts normal function.
- 1. Dissolve: To convert solid matter into a liquid state.
- 2. Distal: Pertaining to that part of a bodily structure that is furthest away from the centre of the body.
- 2. Distoproximal: From the tip of an appendage to where it joins the body.
- 1. Distribution: The manner in which phenomena or pathological lesions are spread over an area.
- 2. Dorsal: Pertaining to the posterior part of the body or organ.
- 2. Dorsiflexion: a) The upward movement of the foot rotating at the ankle joint.  
b) The backward movement of the hand rotating at the wrist joint.
- 2. Dorsum: The upper or posterior surface of part of the body. e.g. Hand, foot.
- 2. Duct: A channel or tube within the body for the passage of secretions. e.g. Exocrine glands, gall bladder, liver.
- 1. Dysfunction: An abnormality of function of a tissue, organ, or physiological system.
- 10. Dyskinesia: Difficulty or abnormality in performing voluntary muscular movements.
- 9. Dysmorphism: An abnormality of body form caused by embryonic/foetal developmental disorder.
- 9. Dysostosis: Abnormal formation of bone, or formation of bone in abnormal places.
- 9. Dysplasia: An abnormal growth or differentiation of cells.
- 9. Dystrophy: An abnormal growth or degeneration of tissue or organ.

## E

- 9. Eburnation: Wearing down of articular cartilage, exposing subjacent bone that progressively becomes sclerotic, dense, and polished.
- 10. Ecdemic: A disease not normally occurring within a population, but introduced from elsewhere.
- 3. Ectocranial: Of or relating to the exterior of the cranium.
- 2. Ectoderm: The outer layer of the three germ layers of the early embryo, giving rise to the nervous system, sense organs, teeth, oral mucosa and epidermis.
- 8. Efferent nerve: Peripheral nerve conveying nerve impulses from the central nervous system to muscles and glands.
- 10. Effusion: Presence of excess blood or tissue fluid in an organ, tissue, or body cavity.
- 1. Elasticity: The property of returning to an initial state or form following deformation.
- 2. Elevation: a) A raised area or point of greater height.  
b) Upward movement of a limb or body part.
- 12. Embalm: The treatment of a dead body with preservatives, to delay decomposition.
- 10. Embolus: An inclusion of fluid, gas, fat, thrombus, or extraneous cells (e.g. neoplastic cells) within a blood vessel, transported to another point within the cardiovascular system.

10. Embryo: Products of conception within the uterus up to the eighth week of gestation.
2. Eminence: A projection from a bone.
10. Empyema: Pus within a pre-existing body cavity or space.
3. Enamel: The hard, highly mineralised outer coating of dental crowns.
12. Encrust: An abnormal adherent hard accumulation of mineral salts or organic matter on to the surface of a structure.
10. Endemic: A disease that is constantly present in a geographic area or culture.
2. Endochondral: Within the cartilage matrix.
3. Endocranial: Within the cranium/ pertaining to the inner surface of the cranium.
2. Endocrine: Ductless glands producing hormones that are secreted into the blood stream.
2. Endoderm: The inner layer of the three germ layers of the early embryo, giving rise to the lining of the gastrointestinal, urogenital, pulmonary tracts, liver, gall bladder and pancreas.
5. Endomysium: The connective tissue sheath that surrounds individual muscle fibres.
9. Endophytic: Pertaining to neoplastic cells invading inwards from the surface of a tissue or organ.
1. Enlargement: Increase in size of a tissue or organ.
2. Enteric: Pertaining to the intestines.
3. Enthesis: A tendinous or ligamentous attachment to a bone element, having its own blood and nerve supply.
9. Enteseal changes (formally termed musculoskeletal stress markers, MSM): bone formation or destruction at muscle attachment sites, or entheses.
9. Enthesitis: Inflammation of an entheses.
9. Enthesopathy: An inflammatory disorder of the tendinous or ligamentous attachment to bone.
3. Enthesophyte: An ossified entheses; bone formation at the site of an entheses.
9. Environmental stress: Environmental conditions that are capable of interfering with optimal human functioning.
2. Enzyme: A protein that speeds up the rate of a biological reaction without itself being used up in the process.
2. Eosinophil: A type of white blood cell that becomes more abundant in the blood in certain parasitic infestations and allergic reactions.
3. Epicondyle: The protuberance above a condyle at the end of an articulating bone.
10. Epidemic: A sudden outbreak of an infectious disease in a population, which spreads rapidly and affects a large proportion of the population.
1. Epidemiology: The study of the distribution and determinants of disease in a population.
2. Epidermis: The outermost layer of the skin.
5. Epimysium: The fibroelastic tissue surrounding a muscle.
3. Epiphyseal cartilage: Hyaline cartilage separating the epiphysis and diaphysis. It is involved in the longitudinal growth of tubular bones. On ossification it determines the cessation of longitudinal growth in that bone.
3. Epiphysis: The growing end of a long bone, separated by cartilage from the diaphysis, but uniting with the diaphysis on cessation of growth.
2. Epithelium: The layer of cells covering internal and external surfaces of the body.

- 9. Erosion: The progressive localised loss of a living bone surface, due to physical or biochemical processes.
- 9. Erosive: The process creating erosion of a surface.
- 2. Erythrocyte: Red blood cell.
- 2. Erythropoiesis: The production of red blood cells within the bone marrow.
- 12. Etch: Post-mortem marking of bone surfaces by chemical action.
- 2. Eversion: Turning outwards.
- 10. Exarticulation: The surgical or traumatic removal of a limb through a joint.
- 1. Excarnate: The removal of flesh.
- 12. Excoriation: The removal of a surface by scraping.
- 1. Excrete: Removal from the body of waste products of metabolism.
- 9. Excretion: The waste product that has been excreted.
- 9. Exfoliate: Separation of surface epithelium from subjacent tissue.
- 2. Exocrine glands: Glands that secrete chemicals either through a tube or a duct.
- 9. Exophytic: Outward growth from an epithelial surface, characteristic of benign neoplasms.
- 9. Exostosis: A benign outgrowth from the external surface of bone.
- 1. Expansion: Localised or generalised enlargement of a tissue or organ.
- 1. Expose: To make visible.
- 2. Extension: a) A localised protrusion of a tissue.  
b) The straightening of a limb from a position of flexion.
- 5. Extensor muscles: The muscles attached to the axial or appendicular skeleton that facilitate extension of a limb or the vertebral column.
- 2. External: Outside, outermost.
- 1. Extrinsic: An influence originating from outside the body.
- 1. Extrusion: Structure that bulges out or is protuberant.
- 9. Exudate: Slow escape of liquid through vascular walls into tissue spaces.

## **F**

- 2. Facet: a) Any small plane surface on a bone, usually an area marking an articulation with another bone.  
b) A flat surface on a tooth.
- 2. Fascia: Layer of connective tissue enveloping organs or tissues.
- 10. Febrile: Pertaining to, or affected with fever.
- 10. Fever: A body temperature that is above the normal range.
- 2. Fibrin: An insoluble protein formed during the clotting process of blood.
- 2. Fibroblast: A cell contributing to the formation of fibrous tissue.
- 2. Fibrocartilage: Dense cartilaginous tissue, the matrix of which consists of parallel bundles of collagen fibres.

9. Fibrosis: The deposition of fibrous collagen within tissues.
2. Fibrous tissue: Connective tissue consisting mainly of fibroblasts and collagen.
4. Fibrous joint: A joint in which the union of participating bones is by continuous intervening fibrous tissue.
2. Fibular: a) Pertaining to the fibula bone.  
b) The lateral side of the lower leg.
2. Fissure: A deep furrow, cleft or slit within an organ or structure.
9. Fistula: A pathological connection between the lumen of two or more hollow viscera, or with the external skin surface.
12. Flake: Pathological or taphonomic separation of a tangential fragment of bone.
3. Flat bone: A sheet like bone with parallel cortices e.g. Scapula, ilium, calvarium.
2. Flexion: The movement at a synovial joint causing the component bones to approximate to each other along their long axes.
5. Flexor muscles: Muscles initiating flexion.
1. Fluctuating asymmetry: Refers to small, random deviations from a prior expectation of symmetric development in morphological traits.
9. Focal: A localised abnormality.
9. Focus: The principal site of a pathological lesion.
10. Foetus: An unborn child between the eighth week of gestation and birth.
2. Follicle: A small secretory sac or gland.
2. Follicular: Forming a circumscribed structure like a follicle.
3. Foramen: A normal opening or hole in a bone that transmits blood vessels, lymphatic channels, and nerves.
2. Fossa: A normal depression or hollow e.g. Iliac fossa, pituitary fossa.
12. Fossilized: The hard remnant of organic tissue that has been replaced post-mortem by mineral salts.
2. Fovea: A natural depression on the surface of a bone or organ.
9. Fracture: In-vivo breakage of bone.
9. Fragmented: Broken into several pieces.
2. Frankfurt plane: A line approximating the base of the cranium, passing from the infraorbital ridge to the midline of the occiput, intersecting the superior margin of the external auditory meatus.
2. Frontal: a) At the front  
b) Pertaining to the frontal bone.
2. Frontal plane: A plane that divides the body into front and back portions i.e. a vertical lengthwise plane running from side to side of the body.
4. Fulcrum: The fixed point of a joint about which a moving bone articulates.
10. Fulminating: A disease of rapid progression and severity; frequently fatal.
9. Fungating: A mass of malignant tissue that has infiltrated the surface of the body or organ and produced an expanding growth.
1. Furrowed: Arranged in parallel rows.

1. Fusion: The joining together of two or more structures.

## **G**

9. Gallstone: A hard mass of bile pigments, calcium salts and cholesterol, which forms within the gall bladder.

8. Ganglion: a) A structure containing a collection of nerve cell bodies.  
b) An abnormal cystic swelling attached to a tendon sheath or joint.

9. Gangrene: The bulk death and necrosis of tissue due to vascular impairment, with or without infection.

2. Gene: The basic unit of genetic material that is carried at a specific place on a chromosome.

1. Generic: General; not specific; typical.

1. Genetic: Pertaining to an inherited condition.

2. Genome: The total genetic composition of an organism.

1. Genus: A system of classification consisting of several closely related and similar species of organisms.

10. Gestation: The period of intra-uterine life.

9. Giant cell: An abnormally large cell, often multinucleated.

2. Gland: An organ that produces and releases a chemical.

1. Globular: A spherical formation or deformation of a structure.

12. Gnaw: The process of chewing at the surface of bone.

4. Gomphosis: A synarthrosis in which a conical process fits into a socket e.g. Tooth in jawbone.

1. Gracile: Of slender build.

9. Granulation: A newly formed mass of multicellular connective tissue comprising fibroblasts, inflammatory cells, and capillaries, found at the margin of ulcers and wounds, and a factor in the healing process.

2. Granulocyte: A granular white blood cell.

9. Granuloma: A localised aggregate of epithelioid macrophages, giant cells, and lymphocytes. It is a component tissue response in specific infectious diseases such as tuberculosis, leprosy, and treponemal disease, and also in sarcoidosis, and Crohn's disease. Granulomata are also formed around the apices of dead or infected teeth and produce characteristic voids in the alveolar bone.

9. Greenstick fracture: An incomplete fracture of a bone in which part of the cortex remains intact.

9. Groove: A linear depression in a bone surface.

9. Gumma: A focal necrotic lesion in tertiary treponemal disease.

9. Gummatous: Having the characteristics of a gumma.

## **H**

9. Haematogenous: Produced by, originating in, or carried in the blood stream.

1. Haematology: The study of blood and blood-forming organs.

9. Haematoma: A localised collection of blood and blood clot within tissue.

2. Haemodynamic: Physiological factors determining the muscular control and function of blood vessels.

- 2. Haemoglobin: A protein complex within red blood cells that is capable of carrying oxygen.
- 2. Haemopoiesis: The formation and development of blood cells.
- 10. Haemorrhage: Extravasation of blood from ruptured blood vessels, either externally or into tissue.
- 2. Hamulus: A small hook-like projection.
- 3. Haversian canals: Small canals running longitudinally in cortical bone, surrounded by concentric lamellae containing osteocytes, and interconnecting with radial Volkmann's canals. Cf. Haversian system.
- 3. Haversian system: Cf. Haversian canals.
- 10. Healed: Damaged tissue in injury or disease that has resolved to normality or scarring through the processes of inflammation and repair.
- 9. Healing: The process of restoring normality to a diseased or injured tissue.
- 10. Hemiparesis: A partial loss of power in one side of the body.
- 10. Hemiplegia: A paralysis of one side of the body.
- 1. Hereditary: A genetically determined inherited abnormality.
- 1. Heredity: The transmission of genetic traits from parents to children.
- 9. Herniation: A protrusion of an organ or tissue through an abnormal opening, and out of its site of origin.
- 1. Heterogeneous: Variability in the properties of cells within a tissue.
- 1. Heterogenous: Of other origin; originating from outside an organism.
- 4. Hinge-joint: A joint in which one convex part of bone fits into a concave part of another, allowing movement in one plane only.
- 2. Histogenesis: The formation of bodily tissues.
- 1. Histology: The study of tissue structure.
- 1. Hole: An aperture passing through a structure.
- 2. Homeostasis: The physiological process of maintenance of equilibrium of bodily systems.
- 1. Homogenous: Cf. homologous.
- 1. Homologous: Organs or anatomical parts that have the same basic structure, and evolutionary origin, but not necessarily the same function or superficial structure. Cf. homogenous.
- 2. Hormone: A chemical substance that is secreted from an endocrine gland and transported by the blood stream to influence the function of a bodily system.
- 9. Howship's lacunae: The microscopic patterns in a bone surface caused by osteoclastic resorption.
- 2. Hyaline cartilage: A semi-elastic amorphous tissue with a matrix of chondroitin sulphate in which collagen fibrils are embedded, covering the articular surfaces in synovial joints.
- 2. Hydroxyapatite: A mineral related to apatite that is the main inorganic constituent of bone and tooth enamel.
- 2. Hyperaemia: Increased blood flow within arterioles and capillaries associated with arteriolar dilation.
- 9. Hypercalcaemia: An abnormally large amount of calcium in the blood.
- 9. Hyperdontia: The development of extraneous teeth.
- 2. Hyperextend: Forcible extension of a limb or joint beyond its normal limits.

- 9. Hyperostosis: Excessive growth of bone tissue.
- 9. Hyperplasia: Enlargement of an organ or tissue due to an increase in the number of component cells.
- 9. Hypertrophy: Enlargement of an organ or tissue due to an increase in the size of component cells.
- 9. Hyperuricaemia: An abnormally high level of uric acid in the blood.
- 9. Hypocalcaemia: An abnormally small amount of calcium in the blood.
- 9. Hypodontia: A lack of development on one or more teeth. Cf. oligodontia.
- 9. Hypoplasia: Under-development and growth of an organ or tissue.
- 9. Hypoxaemia: An abnormally low concentration of oxygen in the blood.
- 9. Hypoxia: Deficiency of oxygen in tissue.

## I

- 10. Iatrogenic: A condition or disease that results from and is caused by treatment for the same or another condition or disease.
- 10. Idiopathic: A disease for which the cause is unknown.
- 10. Illness: The subjective effects of disease in a person.
- 10. Immune: Resistant to a particular disease.
- 2. Immunity: A body defence mechanism, characterised by specificity and memory and mediated by circulating antibodies and white blood cells.
- 1. Immunology: The study of the structure and function of the immune system.
- 9. Impacted: An organ, tissue, or substance that is firmly embedded within another tissue or lumen e.g. Impacted molar tooth, impacted fracture, impacted faeces.
- 1. Impairment: Defective function or structure.
- 1. Impinge: The formative process of impingement.
- 9. Impingement: An abnormal anatomical relationship between two structures, leading to pressure of one upon the other e.g. Subacromial impingement of the humerus.
- 10. Incidence: The number of new cases of a disease or disorders occurring in a specific population within a specified time scale.
- 10. Incision: The cutting of tissue during a surgical procedure.
- 10. Incubate: The occult process of pathogenesis of infectious disease.
- 10. Incubation period: The asymptomatic interval between onset of infection and presentation of clinical symptoms and/or physical signs.
- 10. Induced abortion: The removal (therapeutic or non-therapeutic) of an embryo or foetus before the 24<sup>th</sup> week of gestation. Cf. Abortion/miscarriage.
- 1. Induration: a) The process of becoming hard.  
b) Hardened mass or formation.
- 10. Infanticide: The act of killing an infant.
- 10. Infantile: Pertaining to a child under the age of one year.

- 9. Infarction: Death of tissue due to occlusion of arterial blood supply.
- 9. Infection: Invasion of tissue by pathogenic microorganisms and associated with inflammatory reaction.
- 9. Infectious: Pertaining to pathogenic microorganisms that are capable of transmission to other individuals. Cf. infective.
- 9. Infective: Cf. infectious.
- 2. Inferior: Lower in the body in relation to another structure.
- 2. Inferoanterior: Defining the lower and front part of the body, limb or organ.
- 2. Inferolateral: Defining the lower and that part of the body, limb or organ that is away from the midline.
- 2. Inferomedial: Defining the lower and part of the body, limb or organ that is towards the midline.
- 2. Inferoposterior: Defining the lower and posterior part of the body, limb or organ.
- 9. Infiltration: The abnormal entry of a substance into a tissue or organ.
- 9. Inflammation: A localised protective response elicited by injury or destruction of tissues that serves to destroy, dilute or wall-off both the injurious agent or the injured tissue and return the host to homeostasis.
- 1. Inherited: A condition passed through generations, and determined by genetic effect.
- 1. Inhumation: Disposal of the dead by burial.
- 1. Innate: Inborn, hereditary.
- 8. Innervation: The nerve supply to a tissue of organ.
- 3. Insertion: The point of attachment of a muscle to a bone that is relatively mobile about a joint during muscular contraction.
- 1. Intermediate: Between two points.
- 1. Interment: The procedure of burial.
- 1. Internal: Inside, within.
- 3. Interosseous membrane: A membrane that unites two bones together.
- 3. Intracartilaginous: Within the cartilage matrix e.g. Intra-cartilaginous ossification.
- 3. Intracranial: Within the cranial cavity.
- 3. Intramembranous: Within membranous tissue e.g. Intramembranous ossification.
- 10. Intrauterine: Within the uterine cavity.
- 1. Intrinsic: An inherent defect within the structure, without external cause.
- 9. Invasion: Infiltration of a tissue or organ from an external source.
- 2. Inversion: Turning inwards.
- 1. In-vitro: Biological phenomena occurring outside the living organism.
- 1. In-vivo: Biological phenomena occurring within a living organism.
- 9. Involucrum: An enveloping sheath of new bone forming around dead bone, as in osteomyelitis.
- 2. Ipsilateral: On or affecting the same side of the body.
- 3. Irregular bones: Irregularly shaped bones with spongy interior and surrounding compact bone.

9. Ischaemia: An inadequate supply of oxygenated blood to an organ or tissue.

1. Isotropic: Identical in all directions.

## J

2. Joint: The articulating point or connection between two or more bones.

4. Joint capsule: The fibrous tissue enveloping a joint and attached to the juxta-articular zone of the bones comprising the joint.

2. Juxta-articular: Adjacent to a joint.

## K

9. Kyphosis: A pathological anteroposterior curvature of the spine (vertebral column of the skeleton), concave anteriorly.

## L

2. Labial: Pertaining to a lip.

4. Labrum: A lip-like fibrous, cartilaginous, or osseous structure around the margins of a socket joint e.g. Acetabulum.

1. Labyrinth: A group of communicating cavities.

9. Lacuna: A small cavity or depression within a tissue.

3. Lamellae: Parallel layers of connective tissue (e.g. concentric lamellae) in Haversian systems in bone.

3. Lamellar bone: Cf. compact bone.

10. Latent: Hidden, inactive. A period between the onset, or during the course of a disease, when symptoms and physical signs of the disease are not apparent.

2. Lateral: Pertaining to the side of a structure that lies furthest from the midline of the body.

2. Lateral rotation: Movement around the long axis of a joint, away from the midline.

8. Leptomeninges: Arachnoid mater and pia mater. Cerebrospinal fluid circulates between these two membranes.

9. Lesion: A pathological abnormality associated with disease or injury.

2. Leucocyte: Cf. white blood cells.

2. Ligament: Fibrous connective tissue linking two or more structures together.

2. Linea: A line.

1. Linear: Arranged in a line.

2. Lingual: Facing the tongue or oral cavity.

9. Livor mortis: Discolouration of the skin due to pooling of the blood in the dependent parts of the body following death.

2. Lobe: A well-defined portion of an organ that is a curved or rounded projection or division, typically consisting of two or more parts, divided by fissures.
  1. Lobular: Pertaining to, resembling, or composed of small lobes.
  2. Lobulated: The components of a tissue or organ that are divided into individual lobes by a membrane.
3. Long bone: A tubular bone of the appendicular skeleton.
  1. Longitudinal: Pertaining to the long axis of a structure.
  2. Lordosis: The normal curvature of the lumbar spine, convex anteriorly.
2. Lumen: A central space within a viscus, lymphatic, or vascular channel.
9. Luxation: The disarticulation of bones comprising a joint from their normal anatomical relationship. May be partial (subluxation) or complete (dislocation).
7. Lymph: A clear proteinaceous fluid that bathes the tissues, flows in the lymphatic vessels and is a component of the inflammatory process.
  2. Lymphocyte: A small circulating cell that is a component of immunological reactions.
7. Lymph node: A normal swelling in a specialised tissue for the collection and redistribution of lymph, and for the production of lymphocytes.
7. Lymphatic system: A network of lymphatic vessels and nodes that carry lymph from the bodily tissues centrally, towards the heart.
9. Lysis: Pathological disintegration of cells with release of the intracellular contents.
9. Lytic lesion: A localised resorptive lesion of bone.

## **M**

2. Macrophage: A large phagocytic cell active in chronic infective diseases.
  1. Macroscopic: Visible to the naked eye.
10. Malady: Disease, disorder, or ailment.
9. Malformation: An abnormal variation of structure due to disease or developmental defect.
9. Malignant: A condition characterised by a high risk of morbidity or mortality.
9. Malignant neoplasm: A neoplasm that is invasive into adjacent tissues and spreads via the vascular and lymphatic systems, and through body cavities, to distant tissues as metastases.
2. Malleolus: A hammer-like projection.
9. Malocclusion: Improper meeting of the upper and lower teeth.
9. Malunion: The joining together of two or more fractured bones in an abnormal anatomical relationship.
2. Manual: Pertaining to the hand.
  1. Margin: The edge of a structure.
3. Marrow: The tissue contained within the central lumen of bone.
  1. Mass: A solid pathological lesion within a structure or organ.
  2. Matrix: The total structural components of an organ in which specialised elements are contained.

- 2. Meatus: A passage, channel or canal, opening externally.
- 2. Medial: Pertains to the margin of a structure that lies nearest to the midline of the body.
- 2. Medial rotation: Movement around the long axis of a joint towards the midline of the body.
- 2. Median plane: Denotes the plane of the body that divides it into right and left sides.
- 2. Mediolateral: From the centre of a structure to one side or another.
- 2. Medulla: The inner part of an organ or tissue that is anatomically distinguishable from the outer part (cortex) surrounding it.
- 3. Medullary cavity: The inner cavity of bone that contains marrow but not trabecular bone.
- 2. Membrane: a) A thin layer of tissue surrounding the whole or part of an organ, or tissue lining a cavity, or separating adjacent structures.  
b) The lipoprotein cell wall.
- 8. Meninges: The three connective tissue layers—dura mater, arachnoid mater, pia mater—that line the intracranial cavity and the spinal canal, and invest the central nervous system. Cerebrospinal fluid circulates between the arachnoid and pia mater.
- 4. Meniscus: A fibrocartilaginous structure lying between the articulating surfaces within a synovial joint.
- 2. Mental: Pertaining to the chin.
- 2. Mesial: a) Pertaining to the median plane.  
b) Designating the surface of a tooth towards the midline of the jaw.
- 2. Mesoderm: The middle germ layer of the embryo that gives rise to cartilage, bone, muscle, blood, kidneys, gonads, and connective tissue.
- 2. Metabolism: The totality of physical and biochemical processes within the body necessary for the maintenance of life.
- 3. Metaphysis: The growing zone of a bone, lying between the epiphysis and the diaphysis.
- 9. Metaplasia: A change of morphological characteristics from one mature cell type to another: it may be a stage in the development of malignant neoplasia.
- 9. Metastasis: A secondary malignant lesion spread from the site or origin of a primary malignant neoplasm to another bodily organ or tissue. The mode of spread is via the lymphatic system, the blood circulatory system, or within bodily cavities. The term does not apply to direct spread of the primary lesion into adjacent tissue.
- 1. Microorganism: An organism that is not visible to the naked eye.
- 1. Microstructure: The structure of a tissue that is not visible to the naked eye.
- 2. Midsagittal plane: A vertical plane along the midline of the body dividing the body into right and left halves.
- 1. Mineralisation: The deposition of inorganic salts within a tissue.
- 10. Miscarriage: Cf. abortion.
- 9. Mixed dentition: Both deciduous and permanent teeth are present in the dental arcade.
- 8. Mixed nerve: A peripheral nerve that has two or more components of sensory, motor, or autonomic modalities.
- 2. Modelling: A biological process of synergistic osteoclastic and osteoblastic activity resulting in morphological modification of a tissue, organ, or structure.
- 2. Monocyte: A large white blood cell.

- 10. Monoparesis: Partial weakness affecting a single extremity.
- 10. Monoplegia: Paralysis of one extremity.
- 10. Morbidity: A state of disease.
- 1. Morphology: The study of the physical appearance of a tissue, organ or structure.
- 1. Mortality: Pertaining to death.
- 10. Mortality rate: The incidence of death in a population in a given period of time.
- 8. Motor nerve: Peripheral nerve fibres conveying impulses from the central nervous system to receptors, to stimulate muscle contraction.
- 2. Mucosa: The membrane covering canals and cavities that open on the outside of the body, such as gastrointestinal and respiratory tract. Cf. mucous membrane.
- 2. Mucous membrane: Cf. mucosa.
- 9. Multicentric: A disease in which there is more than one centre of primary origin. Applies particularly to malignant neoplastic disease in which there are multiple centres of oncogenesis, either synchronous or sequential.
- 9. Multifocal: A disease or condition with multiple sites of similar pathological lesions throughout the body.
- 12. Mummification: The process of converting dead soft tissue into a desiccated hard tissue.
- 1. Mural: Pertaining to the wall of a structure.
- 5. Muscle insertion (mobile end): The attachment of a muscle to a bone that is primarily involved in movement about a joint.
- 5. Muscle origin (fixed end): The attachment of a muscle to a bone that is relatively immobile in joint function.
- 2. Mutation: An alteration in the base sequence of DNA, resulting in the synthesis of an abnormal protein that is often a stage in carcinogenesis.
- 10. Myalgia: Muscle pain.
- 9. Mycosis: Fungal infection.
- 1. Myology: The study of muscles.
- 9. Myopathy: Any disease of muscle.
- 9. Myositis: An inflammatory condition of muscle.

## **N**

- 2. Nasopharynx: The area of the upper throat that lies behind the nose.
- 1. Natural (innate) immunity: Immunity that naturally exists and does not require prior sensitisation to an antigen.
- 9. Necrosis: Pathological death of cells or tissue within a living organism.
- 10. Neonatal: Pertaining to a child in the first 28 days after birth.
- 9. Neoplasia: Cf. neoplasm.
- 9. Neoplasm: A pathological and uncoordinated growth of tissue, the growth persisting after cessation of the pathological cause that initiated the process. Cf. neoplasia.
- 8. Nerve fibre: A long fine process extending from the body of a nerve cell (neuron), and transmitting nerve impulses.

- 8. Neural: Pertaining to the nervous system.
- 10. Neuralgia: Pain along the course of a nerve.
- 9. Neurogenic: A disease caused by neural dysfunction.
- 8. Neuron: Nerve cell.
- 9. Neuropathy: A pathological dysfunction of central or peripheral nerves.
- 2. Neutrophil: A mature white blood cell with three to five lobed nuclei.
- 9. Nidus: A focus of infection within a tissue.
- 9. Nodular: Abnormal morphology of tissue in which there is an aggregation of cells into an irregularly shaped mass.
- 9. Non-union: Failure of union of fractured bones.
- 2. Notch: An indentation in an organ, particularly bone.
- 6. Nutrient artery: The specific artery supplying an organ.
- 3. Nutrient canal: The channel within bone tissue that transmits blood vessels.
- 3. Nutrient foramen: The orifice in the cortical bone surface at the point of entrance or exit of nutrient blood vessels.
- 6. Nutrient vein: The specific venous drainage vessel from bone.

## O

- 1. Oblique: Neither parallel nor perpendicular to the long axis of a body or limb.
- 9. Oblique fracture: A fracture at an angle to the long axis of a bone.
- 3. Occlusal: The surface of a tooth that meets an opposing tooth in occlusion.
- 9. Occlusion: a) Pathological blockage of a lumen.  
b) Contact between opposing dentitions, with maximum interdigitation.
- 1. Occult: An abnormality that is present but not observable to the naked eye.
- 10. Odontalgia: Toothache.
- 3. Odontoblast: Cells forming the outer surface of dental pulp that produces the dentine of a tooth.
- 9. Oedema: A pathological accumulation of fluid in bodily tissue.
- 10. Olfactory: Pertaining to the sense of smell.
- 9. Oligodontia: Cf. hypodontia.
- 9. Oncogenesis: The progression of cytological, genetic, and cellular changes that culminate in the formation of a malignant neoplasm.
- 1. Oncology: The study of neoplastic disease.
- 9. Open fracture: Cf. compound fracture.
- 5. Opponens muscles: Muscles in the hand that facilitate bringing together the digits.
- 10. Opportunistic microorganism: Usually a harmless commensal but causing disease in an individual with impaired immunity.
- 2. Opposition: The position of the thumb when it is flexed towards the palmar surfaces of the digits.

- 2. Oral: Pertaining to the mouth.
- 2. Orbital: Pertaining to the orbit/s.
- 2. Organ: A structural unit that serves a specific function.
- 1. Organic: a) Pertaining to chemical compounds containing carbon within living tissue.  
b) Pertaining to an organ of the body.
- 9. Organisation: The normal process of tissue repair.
- 2. Organogenesis: The process of bodily organ formation and development.
- 2. Orifice: A normal non-pathological opening in a structure.
- 5. Origin: The fixed end or attachment of a muscle to bone.
- 2. Oropharynx: The area of the throat that lies behind the mouth and tongue.
- 2. Os: Bone.
- 2. Ossicle: A small bone.
- 2. Ossification: The process of bone formation.
- 2. Ossification centre: Specific area within the developing skeletal tissues at which bone formation commences.
- 9. Osteitis: Inflammation of bone.
- 2. Osteoblast: Specialised cell arising from embryonic mesoderm, which is responsible for bone formation.
- 9. Osteochondritis: Inflammation of bone and cartilage.
- 2. Osteoclast: Specialised cells involved in resorption of bone.
- 2. Osteocyte: An inactive osteoblast within bone matrix.
- 2. Osteogenesis: The process of bone formation. Cf. ossification.
- 2. Osteoid: The organic component of extracellular bone tissue.
- 1. Osteology: The study of the structure and function of bones.
- 9. Osteolysis: The pathological dissolution of bone tissue.
- 1. Osteometry: The measurement of bones.
- 2. Osteon: The basic structural unit of compact bone, comprising Haversian canals and circumferential lamellae.
- 9. Osteopenia: A decrease in bone matrix.
- 9. Osteophyte: A pathological projection of new bone usually at the margins of synovial joints and intervertebral discs.
- 9. Osteoporosis: A decrease in mineral density of bone.
- 10. Otalgia: Pain in the ear.

## **P**

- 1. Palaeontology: The study of fossil faunal (including human) and floral remains.
- 1. Paleopathology: The scientific study of ancient faunal (including humans) and floral diseases manifest in the corporeal remains of organisms in past populations.

10. Palliative: Controlling symptoms without curing the disease.
2. Palmar: Pertaining to the front of the hand in the anatomical position.
10. Pandemic: An epidemic crossing international boundaries.
10. Paraesthesia: A change in perceived sensation within the distribution of one or more sensory nerves, commonly caused by peripheral sensory neuropathy.
10. Paralysis: A complete loss of muscle power in one or more muscles, commonly caused by peripheral motor nerve or central nervous system dysfunction.
2. Paranasal: Located beside the nose.
1. Parasite: An organism that lives on or in, and is dependent for survival on, another living organism.
2. Parenchyma: The morphologically and functionally specific cells of an organ.
10. Paresis: A partial loss of muscle power in one or more muscles commonly caused by motor nerve dysfunction.
2. Parietal: a) Refers to a membrane that lines the outer wall of a normal body cavity e.g. Peritoneum, pleura.  
b) Two lateral plate bones of the cranium.
10. Parturition: The process of childbirth.
9. Pathogen: A microorganism that is capable of inducing disease.
9. Pathogenesis: The origin and progressive development of a disease in tissue.
9. Pathogenicity: The capacity of a microorganism to cause disease.
9. Pathognomonic: Pathological features characteristic of (but not exclusive to) a specific disease.
9. Pathological: Related to disease.
1. Pathology: The scientific study of disease processes within bodily tissues.
2. Pectoral: Pertaining to the chest.
2. Pedal: Pertaining to the feet.
9. Penetration: The disruption of the surface of a structure or organ by a foreign body or pathological lesion.
9. Perforation: The creation of a channel or hole connecting opposing surfaces of an organ or structure.
3. Perichondrium: A layer of connective tissue that covers the surface of cartilage.
10. Peri-mortem: The period of time immediately before and after death.
5. Perimysium: The connective tissue sheath that envelops each bundle of muscle fibres.
10. Perinatal: The period of time around childbirth, usually from the 28<sup>th</sup> week of gestation to the 4<sup>th</sup> postnatal week.
9. Periodontal disease: Disease and/or destruction of the supporting structures of the teeth. Exposure of tooth roots may be due to this or the non-pathological process of compensatory eruption.
2. Periosteal new bone: New bone formed between the periosteum and the cortical surface of bone, by osteoblast activation in the germinative layer of periosteum. Sequentially, this bone, initially distinct from the cortex, becomes integral with the cortical surface.
9. Periosteal reaction: The observable changes of the cortical surface caused by activation of osteoblasts in the germinative layer of periosteum, and osteoclasts in the cortical surface.
3. Periosteum: An osteologically active layer of vascular connective tissue enveloping the bones except at the surfaces of joints.

9. Periostitis: Inflammation of the periosteum, leading to periosteal reaction and periosteal new bone formation.  
Periostitis, per se, does not induce changes that are manifest on dry bone.
1. Peripheral: Areas away from the centre of structures or organs.
  2. Peritoneum: The membrane that lines the abdominal cavity. Parietal peritoneum lines the wall of the cavity.  
Visceral peritoneum invests some intra-abdominal structures.
  1. Permeative: Spreading.
  2. Peroneal: Pertaining to the lateral side of the lower leg.
  2. Phagocyte: A multinucleated white blood cell capable of ingesting microorganisms.
  9. Phagocytosis: The process of ingestion of microorganisms by phagocytes.
  10. Physical sign: A manifestation of disease detectable by observation, palpation, percussion, or auscultation in the living individual.
  1. Physiology: The study of the function of the bodily organs and systems.
  1. Pit: A hollow or indentation in a surface.
  9. Pitting: The pathological osteoclast-mediated formation of resorbed hemispherical indentations of varying size within the surface of bone.
  2. Plantar: Pertaining to the under surface (sole) of the foot.
  9. Plaque: A thin flat layer of tissue applied to and progressively integral with, the surface of a structure or organ.
  1. Plasticity: The capability of being shaped, moulded or altered morphologically.
  2. Plate: A flattened projection.
  2. Platycnemic: Mediolateral flattening of the tibia.
  2. Platymeric: Mediolateral flattening of the femur.
  2. Pleura: The membrane lining the chest cavity. Parietal pleura lines the external walls of the cavity. Visceral pleura envelops the lungs.
  3. Pneumatized bone: Bone structures that contain air-filled cavities e.g. Paranasal sinuses.
  12. Polished: A bone surface that is smooth from repeated fine abrasion eg. eburnation of a joint.
  2. Popliteal: Posterior surface of the knee.
  1. Pore: A small opening that allows passage of liquids and gases.
  9. Porosity: Cf. porous.
  9. Porous: The state of bone tissue caused by perforating pathological lesions. Cf. porosity.
  2. Postcranial: Refers to the whole skeleton except the skull.
  2. Posterior: At the rear.
  2. Posteroanterior: Extending from the front to the back of an organ or body.
  2. Posterolateral: Defining the rear and that part of the body, limb or organ that is away from the midline.
  2. Posteromedial: Defining the rear and that part of the body, limb or organ that is towards the midline.
  2. Posterosuperior: Defining the rear and upper part of the body, limb or organ.
  10. Post-mortem: After death.

10. Postnatal: After birth.
10. Prenatal: Before birth.
3. Presacral: Anterior to the sacrum.
10. Prevalence: The total number of cases of a disease present at a specific time in a community.
9. Primary: a) The first.  
b) The initial lesion in a pathological process e.g. Neoplasm.
2. Prime mover: A muscle that principally initiates the movement of skeletal elements.
2. Primordial: Cells or tissues that are formed in the earliest stages of embryonic development.
2. Process: A normal protuberance of the skeleton.
10. Prodromal: Any feature heralding the onset of a disease.
2. Prognathism: Having projecting lower or upper jaws.
10. Prognosis: A prediction of the future progress and outcome of a disease.
1. Projection: An outgrowth or protuberance.
1. Proliferate: To spread or increase.
2. Pronation: Turning the hand so that the palm faces downward.
5. Pronator muscles: Muscles of the forearm that facilitate pronation.
2. Prone: Lying face down.
1. Prosthesis: An artificial device that is attached to the body as an aid to appearance or function.
1. Protract: To increase the duration of a pathological condition.
2. Protuberance: A smooth rounded projection from a structure or organ.
2. Proximal: The part of an organ or structure that lies nearest to the mid line of the body.
9. Pseudoarthrosis: A false joint.
1. Pseudopathology: Morphological features in an organ or structure that resemble changes in disease, but for which there is no pathological cause.
10. Puerperium: The period of time, up to 6 weeks, after birth.
9. Puncture: A wound in a structure made by a sharp object.
9. Purulent: Associated with pus.
9. Pus: Necrotic tissue and cells formed within and part of an infective inflammatory focus.
12. Putrefaction: Decomposition of dead tissue due to bacterial action.
9. Pyogenesis: The process of pus formation.
9. Pyogenic: Microorganisms that are capable of inducing inflammatory change in which pus is formed.

## **Q**

10. Quadraplegia: Paralysis of all four limbs.
10. Quiescent: A disease that is in an inactive phase.

**R**

- 2. Radial: Pertaining to the radius. The lateral side of the forearm.
- 1. Radiate: To spread outwards beyond an initial focus.
- 11. Radiodensity: The degree of X-ray penetration exhibited in a radiograph.
- 11. Radiolucent: An area having the property of allowing X-rays to pass through it. It usually appears darker on a radiograph.
- 11. Radiopaque: An area having the property of absorbing X-rays and appearing whiter on a radiograph.
- 2. Radioulnar: Pertaining to the radius and ulna.
- 1. Reactive: A change developing in response to a stimulus.
- 9. Recurrence: A redevelopment of a pathological change in tissue after cessation or inactivity of the initial disease.
- 2. Red blood cell: Haemoglobin-containing cells that carry oxygen to the tissues.
- 3. Red bone marrow: Bone marrow in which the stroma of the reticular network are filled with erythropoetic tissue that produces red blood cells.
- 9. Regeneration: The formation of new cells identical to those lost in a disease process.
- 10. Relapse: The return of a disease after its apparent resolution.
- 2. Remodelling: The process of morphological transformation of bone by the combined action of osteoclasts and osteoblasts.
- 9. Repair: The restoration of damaged or diseased tissue through growth of new cells.
- 2. Resistance: The capacity of the body, through innate or acquired immunity, to combat pathogenetic forces.
- 10. Resolution: The restoration of normality.
- 9. Resorption: The loss of bone tissue due to osteoclastic activity.
- 1. Retraction: To withdraw.
- 1. Retroversion: Turning or bending backwards.
- 9. Rhabdomyolysis: Skeletal muscle destruction.
- 1. Rheumatology: The study of diseases involving joints, tendons, muscles, ligaments and associated structures.
- 3. Ridge: A localised linear eminence of bone.
- 9. Rigor mortis: Chemical changes in muscles after death causing the limbs of a corpse to stiffen.
- 2. Rostral: Towards the nose.
- 2. Rotation: The circular movement of a limb about its joint.

**S**

- 2. Sagittal plane: A dorsoventral plane extending down the long axis of the body dividing it into right and left halves.
- 9. Sarcoma: Malignant neoplasm of organs and tissues of embryonic mesenchymal origin.
- 4. Schindylesis: A synarthrosis in which a crest of one bone fits into a groove in another.

- 2. Sciatic: Pertaining to the hip/sciatic nerve or vein.
- 9. Sclerosis: An increased density of tissue due to increased deposition of collagen.
- 9. Scoliosis: Lateral deviation of the spine or vertebral column.
- 12. Scored: Linear indentations produced on a bone surface.
- 12. Scraped: The removal and flaking of a bone surface.
- 12. Scratch: The irregular removal of a bone surface by abrasion.
- 9. Secondary: A pathological change in the body that is the sequel to, and due to, an initial disease process in another anatomical area or physiological system.
- 2. Secretion: The production of a biological active fluid by a specific gland, and its discharge into the vascular system or into a lumen of a viscus.
- 2. Segmentation: The process of formation or division of a tissue or structure into distinct morphological units.
- 8. Sensory nerve: Peripheral nerve fibres transmitting impulses from sensory receptors to the central nervous system.
- 9. Sepsis: Infection of tissues by pathogenic organisms.
- 10. Septicaemia: Widespread infection of bodily tissues due to dissemination of pathogenic organisms in the blood stream from a primary infective focus.
- 2. Septum: A membrane dividing a structure into individual compartments.
- 9. Sequestrum: Dead bone resulting from the process of chronic inflammation in osteomyelitis, remaining within the internal structure of the bone of which it was part.
- 2. Serous cavity: A cavity lined with serous membrane.
- 2. Serous membrane: A layer of mesothelium and connective tissue that lines certain cavities of the body e.g. Peritoneum, pleura, pericardium. The membrane consists of two portions: visceral, covering organs, and parietal, lining the cavity walls.
- 1. Serrated: Saw-like.
- 3. Sesamoid bone: A localised nodule of bone formed within a tendon.
- 9. Sharp force lesions: Lesions caused by an object with sharp edge or point.
- 2. Shear: A force caused by an opposite but parallel sliding motion of planes within a bone.
- 3. Short bones: Bones within the skeleton that have limited movement and which, in association with adjacent short bones, provide strength and compactness. e.g. carpals and tarsals..
- 2. Sinister: Pertaining to the left side.
- 2. Sinistrad: Towards the left.
- 2. Sinistrodexter: From left to right side of the body.
- 2. Sinus: a) A tract leading from a focus of infection to the skin surface or into a hollow organ,  
b) A wide channel containing blood e.g. Intracranial sinuses,  
c) An air-filled cavity within a bone e.g. Paranasal sinuses. Cf antrum.
- 5. Smooth muscle: Involuntary muscle controlled by the autonomic nervous system.
- 2. Somatic: a) Pertaining to the body rather than the mind.  
b) Pertaining to the body wall, excluding the viscera.

4. Spheroidal joint: Cf. ball and socket joint.
9. Spicule: A small splinter or needle of bone.
8. Spinal nerves: The 31 pairs of nerves that leave the spinal cord and are distributed to the body. Each has an anterior (motor) root and a posterior (sensory) root.
9. Spiral fracture: Relates to a fracture of a long bone that is both longitudinal and circumferential.
2. Splanchnic: Pertaining to the viscera.
9. Splinter: A fragment of bone separated by trauma from its original site.
1. Split. An acquired division in a structure.
3. Spongy bone: Cf. trabecular bone, cancellous bone.
2. Spur: A projection from a bone.
2. Squama: Flat plate of bone.
2. Squamous: Flat structure, cell, or tissue.
12. Stain: A discolouration of bone.
9. Stenosis: The pathological narrowing of a lumen.
10. Stillbirth: A dead foetus born after the twenty-fourth week of gestation.
1. Stimulus: An agent or phenomenon that provokes a response or activity in tissues and cells.
9. Strain: Damage to a muscle, tendon, or ligament by overstretching.
1. Strength: The capacity to withstand external force.
1. Stria: A band of tissue that differs in elevation, texture, or colour from adjacent tissue.
5. Striated muscle: Muscles that are under voluntary nervous system control.
9. Striation: Parallel linear grooving of bone surface usually by remodelling of the cortical bone in a pathological process.
2. Stroma: The connective tissue basic component of an organ or tissue.
2. Styloid: A long pointed bony process.
2. Subchondral: Lying beneath a cartilaginous structure.
2. Subcutaneous: Tissue subjacent to the dermis of the skin.
9. Subluxation: A partial dislocation of a joint, in which there remains some contact between articular surfaces.
2. Subperiosteal: Subjacent to the periosteum.
2. Subungual: Subjacent to a nail.
2. Sulcus: A normal groove within a structure.
1. Superficial: At or near to the surface of a structure.
1. Supernumerary: An extra organ or tissue.
2. Superior: Situated uppermost in relation to another structure.
2. Superoanterior: Defining the upper and front part of the body, limb or organ.
2. Superolateral: Defining the upper and that part of the body, limb or organ that is away from the midline.

- 2. Superomedial: Defining the upper and that part of the body, limb or organ that is towards the midline.
- 2. Superoposterior: Defining the upper and rear part of the body, limb or organ.
- 2. Supination: The action of turning the hand to have the palm facing upwards.
- 5. Supinator muscle: Muscles of the forearm that facilitate supination.
- 2. Supine: Lying face uppermost.
- 9. Suppuration: The process of pus formation.
- 9. Suppurative: Pus forming.
- 4. Suture: Fibrous or fixed joints found in the cranium.
- 9. Swelling: A pathological enlargement of a bodily structure.
- 1. Symmetry: Morphological equality of structures on either side of a plane or border.
- 4. Symphysis: A joint with fibrocartilaginous union.
- 10. Symptom: The subjective physical and psychological manifestations of disease that are perceived and presented by an afflicted individual.
- 8. Synapse: The junction of two neurons, across which nerve impulses pass.
- 4. Synarthrosis: An immovable joint in which the participating bones are united by fibrous tissue.
- 4. Synchronosis: A slightly movable joint in which the participating bones are united by hyaline cartilage.
- 9. Syndesmophyte: A vertical outgrowth of bone from the margin of vertebral end-plates.
- 4. Syndesmosis: An immovable joint in which the participating bones are united by connective tissue.
- 10. Syndrome: A combination of symptoms and physical signs that together are indicative of a specific disease.
- 1. Synergism: Two or more biologically active chemicals or cells that in combination produce effects that are greater than the sum of the effects of each acting separately.
- 2. Synostosis: The union by ossification of adjacent bones.
- 4. Synovial joint: A freely movable joint surrounded by a fibrous capsule and lined with synovial membrane, with articular surfaces covered with hyaline cartilage. Cf. Diarthrosis
- 2. Synovial sheath: A sac, identical in structure with synovial membrane, which surrounds specific tendons.
- 4. Synovium/synovial membrane: The membrane lining the capsule of a movable joint, which secretes a lubricating synovial fluid.
- 1. Systematic: Pertaining to each body system separately.
- 1. Systemic: Pertaining to all body systems as a whole.

## T

- 2. Table: One of the two layers of compact bone that make up the internal and external walls of the cranium.
- 1. Taphonomy: Changes that occur post-mortem in the depositional environment.
- 1. Taxonomy: The scientific classification of living organisms.
- 5. Tendon: The inelastic, but flexible, cord consisting of parallel bundles of collagen fibres that attach muscles to bone.

1. Tensile force: Cf. tension.
1. Tension: A force applied to a tissue or organ that may cause it to stretch or rupture. Cf. tensile force.
1. Terminal: The part furthest from a point of reference. The end.
9. Thrombosis: The intravascular in vivo coagulation of blood to form a solid mass (thrombus).
9. Thrombus: An in-vivo coagulation of blood within a blood vessel.
2. Tibial: a) Pertaining to the tibia.  
b) The medial side of the lower leg.
1. Torsion: The process of twisting or rotating about a longitudinal axis.
9. Torus: Bony projections from the midline of the palate, internal surface of the mandible, external auditory canal.
10. Toxaemia: The presence of toxins in the blood.
10. Toxin: A substance having harmful effects, produced by a living organism, usually bacterium, and capable of causing signs and symptoms of varying severity.
3. Trabeculae: Individual bony struts that make up trabecular bone.
3. Trabecular bone: Marrow-filled and vascular tissue containing filaments of bone (trabeculae), having a lattice-like network of bony pillars within the medullary cavity. Cf. spongy bone, cancellous bone.
1. Translucent: Permitting light to pass through but diffusing it, thus interfering with the clear visibility of objects behind.
2. Transverse: Running at right angles to the long axis of the body.
9. Trauma: Injury.
10. Trepanation: The surgical cutting of a hole in the skull.
10. Trephination: The surgical cutting of a hole in the skull using a saw or drill (trephine).
4. Trochlea: An anatomical part having the morphology and/or function of a pulley.
2. Trunk: The body excluding the head and limbs.
3. Tubercle: a) A small round protuberance of bone.  
b) The specific inflammatory lesion in tuberculosis.
3. Tuberosity: A large round protuberance of bone.
9. Tumour: a) A pathological swelling.  
b) A term synonymous with neoplastic lesions.
1. Tunnel: A channel through tissue that is open at both ends.

## U

10. Ulcer: A full thickness defect in surface epithelium or mucosa.
2. Ulnar: a) Pertaining to the ulna.  
b) The medial side of the supinated forearm.
1. Undulating: A surface that is smoothly uneven.
1. Union: The joining of two adjacent structures e.g. Healing fracture.

**V**

- 10. Vaccine: A microbial preparation of killed or modified microorganisms that can stimulate an immune response within the body.
- 9. Valgus: A deformity of a limb in which the distal element is deviated away from the midline of the body.
- 9. Varus: A deformity of a limb in which the distal element is deviated towards the midline of the body.
- 6. Vascular: Pertaining to the blood circulatory system.
- 6. Vascular plexus: A network of small arteries or veins.
- 6. Vein: The blood vessel carrying blood towards the heart.
- 2. Ventral: Pertaining to the front of an organ or body.
- 6. Venule: A minute blood vessel draining blood from capillaries. Many venules unite to form a vein.
- 2. Vertical: Running parallel to the long axis of the body.
- 9. Virulence: The ability of a microorganism to cause disease.
- 2. Visceral: Pertaining to the internal organs of the body.
- 2. Viscus: An internal organ.
- 2. Volar: Pertaining to the palm of the hand.
- 3. Volkmann canals: Radially running channels between Haversian canals in lamellar bone.

**W**

- 12. Warp: Twisted, deformed.
- 12. Wear: Deterioration of a structure through usage. Cf. worn.
- 12. Weathered: A change in bone brought about by post-mortem exposure to the atmosphere.
- 2. White blood cells: Nucleated cellular components of blood that are involved in immune and inflammatory responses.
- 3. Wormian bone: Cf. Cranial ossicle.
- 12. Worn: Cf. wear.
- 3. Woven bone: Immature newly formed bone characterised by a disorganised porous lattice-like arrangement of collagen fibres and cells with no specific orientation.

**Y**

- 3. Yellow bone marrow: Bone marrow in which the stroma of the reticular network are primarily filled with fat.

**Z**

- 10. Zoonosis: Infectious disease of animals that can be transmitted to humans.
- 1. Zooarchaeology: The study of faunal (excluding human) remains from archaeological sites.

**PART 2**

## 1. GENERAL TERMS.

Abnormality	Bioarchaeology	Developmental
Adolescence	Biochemistry	Diffuse
Adulthood	Biological population	Directional asymmetry
Aerobic	Biomechanics	Disperse
Aetiology	Biopsy	Disruption
Anaerobic	Bowing	Dissolve
Anatomy	Calcification	Distribution
Anisotropy	Calcitonin	Dysfunction
Annular	Circadian	Elasticity
Anomaly	Circumferential	Enlargement
Anthropology	Cluster	Epidemiology
Antisymmetry	Coagulation	Excarnate
Apex	Coalesce	Excrete
Apical	Commingle	Expansion
Apposition	Concomitant	Expose
Archaeobotany	Confluent	Extrinsic
Archaeology	Crenulated	Extrusion
Arcuate	Cruciate	Fluctuating symmetry
Arthrology	Crush	Furrowed
Asymmetric	Deform	Fusion
Asymmetry	Demography	Generic
Atypical	Dense	Genetic
Benign	Density	Genus
Bevelled	Denticulate	Globular
Bifid	Destruction	Gracile
Bilaminar	Develop	Haematology

## 1. GENERAL TERMS Cont.

Hereditary	Macroscopic	Pore
Heredity	Margin	Projection
Heterogeneous	Mass	Proliferate
Heterogenous	Microorganism	Prosthesis
Histology	Microstructure	Protract
Hole	Mineralisation	Pseudopathology
Homogenous	Morphology	Radiate
Homologous	Mortality	Reactive
Immunology	Mural	Retraction
Impairment	Myology	Retroversion
Impinge	Natural (innate) immunity	Rheumatology
Induration	Oblique	Serrated
Inherited	Occult	Split
Inhumation	Oncology	Stimulus
Innate	Organic	Strength
Intermediate	Osteology	Stria
Interment	Osteometry	Superficial
Internal	Palaeontology	Supernumerary
Intrinsic	Palaeopathology	Symmetry
Isotropic	Parasite	Synergism
In-vitro	Pathology	Systematic
In-vivo	Peripheral	Systemic
Labyrinth	Permeative	Taphonomy
Linear	Physiology	Taxonomy
Lobular	Pit	Tensile force
Longitudinal	Plasticity	Tension

Terminal

Torsion

Translucent

Tunnel

Undulating

Union

Zooarchaeology

## 2. SYSTEMIC AND FUNCTIONAL ANATOMY AND PHYSIOLOGY

Abduction	Basilar	Cranial ossicles
Absorption	Bone	Crest
Acoustic	Brachial	Crista
Adduction	Bursa	Cutaneous
Adsorption	Canaliculus	Cyst
Agonist	Capsule	Cytokine
Ala	Cardiovascular	Depression
Alimentary tract	Carpus	Dermis
Alveolus	Caudal	Dexter
Ameloblast	Cavity	Dextrad
Anasomosis	Cementoblast	Dextrosinister
Anatomical position	Central	Diastema
Antagonist	Cephalad	Differentiation
Anterior	Cephalic	Dilation
Anteroinferior	Cervical	Disarticulated
Anterolateral	Chondroblast	Distal
Anteromedial	Chondrocyte	Distoproximal
Anteroposterior	Chondrogenesis	Dorsal
Anterosuperior	Chromosome	Dorsiflexion
Anteversion	Circumduction	Dorsum
Antibody	Cleft	Duct
Antigen	Collagen	Ectoderm
Apatite	Connective tissue	Elevation
Apoptosis	Contraction	Eminence
Appendicular	Contralateral	Endochondral
Appendicular skeleton	Coronal	Endocrine
Auditory	Corpus	Endocrine gland
Auricular	Cortex	Endoderm
Axial	Cortical	Enteric
Basal	Cortical bone	Enzyme

## 2. SYSTEMIC AND FUNCTIONAL ANATOMY AND PHYSIOLOGY (Continued)

Eosinophil	Haemoglobin	Lumen
Epidermis	Haemopoiesis	Lymphocyte
Epithelium	Hamulus	Macrophage
Erythrocyte	Histogenesis	Malleolus
Erythropoiesis	Homeostasis	Manual
Eversion	Hormone	Matrix
Exocrine gland	Hyaline cartilage	Meatus
Extension	Hydroxyapatite	Medial
External	Hyperaemia	Medial rotation
Facet	Hyperextend	Median plane
Fascia	Immunity	Mediolateral
Fibrin	Inferior	Medulla
Fibroblast	Inferoanterior	Membrane
Fibrocartilage	Inferolateral	Mental
Fibrous tissue	Inferomedial	Mesial
Fibular	Inferoposterior	Mesoderm
Fissure	Inversion	Metabolism
Flexion	Ipsilateral	Midsagittal
Follicle	Joint	Modelling
Follicular	Juxta-articular	Monocyte
Fossa	Labial	Mucosa
Fovea	Lateral	Mucous membrane
Frankfurt plane	Lateral rotation	Mutation
Frontal	Leucocyte	Nasopharynx
Frontal plane	Ligament	Neutrophil
Gene	Linea	Notch
Genome	Lingual	Opposition
Gland	Lobe	Oral
Granulocyte	Lobulated	Orbital
Haemodynamic	Lordosis	Organ

## 2. SYSTEMIC AND FUNCTIONAL ANATOMY AND PHYSIOLOGY (Continued)

Organogenesis	Posteroanterior	Spur
Orifice	Posteromedial	Squama
Oropharynx	Posterosuperior	Squamous
Os	Prime mover	Stroma
Ossicle	Primordial	Styloid
Ossification	Process	Subchondral
Ossification centre	Prognathism	Subcutaneous
Osteoblast	Pronation	Subperiosteal
Osteoclast	Prone	Subungual
Osteocyte	Protuberance	Sulcus
Osteogenesis	Proximal	Superior
Osteoid	Radial	Superoanterior
Osteon	Radioulnar	Superolateral
Palmar	Red blood cell	Superomedial
Paranasal	Remodelling	Superoposterior
Parenchyma	Resistance	Supination
Parietal	Rostral	Supine
Pectoral	Rotation	Synostosis
Pedal	Sagittal plane	Synovial sheath
Periosteal new bone	Sciatic	Table
Peritoneum	Secretion	Tibial
Peroneal	Segmentation	Transverse
Phagocyte	Septum	Trunk
Plantar	Serous cavity	Ulnar
Plate	Serous membrane	Ventral
Platycnemic	Shear	Vertical
Platymeric	Sinister	Visceral
Pleura	Sinistrad	Viscus
Popliteal	Sinistrodexter	Volar
Postcranial	Sinus	White blood cell
Posterior	Somatic	
Posterolateral	Splanchnic	

## 3. SYSTEMATIC ANATOMY: BONES

Antrum	Epicondyle	Occlusal
Apophysis	Epiphyseal cartilage	Odontoblast
Axial skeleton	Epiphysis	Perichondrium
Bone marrow	Flat bone	Periosteum
Bone matrix	Foramen	Pneumatized bone
Boss	Haversian canal	Presacral
Cancellous bone	Haversian system	Red bone marrow
Cartilage	Insertion	Ridge
Cementum	Interosseous membrane	Sesamoid bone
Compact bone	Intracartilaginous	Short bones
Condyle	Intracranial	Spongy bone
Cranial	Intramembranous	Trabeculae
Dental pulp	Irregular bone	Trabecular bone
Dentine	Lamellae	Tubercle
Diaphysis	Lamellar bone	Tuberosity
Diploë	Long bone	Volkman Canal
Ectocranial	Marrow	Wormian bone
Enamel	Medullary cavity	Woven bone
Endocranial	Metaphysis	Yellow bone marrow
Enthesis	Nutrient canal	
Enthesophyte	Nutrient foramen	

## 4. SYSTEMATIC ANATOMY: JOINTS

Amphiarthrosis	Diarthrosis	Suture
Articular	Fibrous joint	Symphysis
Articular capsule	Fulcrum	Synarthrosis
Articular cartilage	Gomphosis	Synchondrosis
Articular fossa	Hinge joint	Syndesmosis
Articular surface	Joint capsule	Synovial joint
Articulation	Labrum	Synovium/synovial membrane
Ball and socket joint	Meniscus	Trochlea
Bursa	Schindylesis	
Condylloid joint	Spheroidal joint	

## 5. SYSTEMATIC ANATOMY: MUSCLES

Abductor muscles	Muscle insertion	Smooth muscle
Adductor muscles	Muscle origin	Striated muscle
Aponeurosis	Opponens muscles	Supinator muscles
Epimysium	Origin	Tendon
Extensor muscles	Perimysium	
Flexor muscles	Pronator muscles	

## 6. SYSTEMATIC ANATOMY: CARDIOVASCULAR

Arterial	Capillary	Vascular plexus
Arterial plexus	Nutrient artery	Vein
Arteriole	Nutrient vein	Venule
Artery	Vascular	



## 9. PATHOLOGICAL.

Abscess	Bursolith	Deformity
Adenocarcinoma	Calculus	Degeneration
Adhesion	Callus	Degradation
Agensis	Cancer	Deposit
Aggressive	Carcinogenesis	Developmental condition
Amelia	Carcinoma	Deviation
Anaplasia	Caries	Diagnostic
Aneurysm	Caseation	Diapedesis
Angiogenesis	Cavitation	Dilatation
Ankylosis	Cellulitis	Discrete
Anoxia	Chondritis	Disability
Aplasia	Cicatrization	Dislocate
Arteritis	Cloaca	Dislocation
Arthritis	Clot	Disorder
Arthropathy	Comminuted fracture	Disorganised
Aseptic	Compound fracture	Dysmorpby
Aseptic necrosis	Compression	Dysostosis
Atresia	Compression fracture	Dysplasia
Atrophy	Consolidation	Dystrophy
Attrition	Contracture	Eburnation
Autoimmune	Contrecoup	Endophytic
Avascular	Cortical defect	Entheseal changes
Avascular necrosis	Cortical thickening	Ehthesitis
Avulsion	Crater	Enthesopathy
Ballistic force lesion	Cut mark	Environmental stress
Benign neoplasm	Dactylitis	Erosion
Bioerosion	Decalcified	Erosive
Blunt force lesion	Defect	Excretion
Break	Deficiency	Exfoliate
Burn	Deformation	Exophytic

## 9. PATHOLOGICAL (Continued)

Exostosis	Hypoplasia	Multifocal
Exudate	Hypoxaemia	Mycosis
Fibrosis	Hypoxia	Myopathy
Fistula	Impacted	Myositis
Focal	Impingement	Necrosis
Focus	Infarction	Neoplasia
Fracture	Infection	Neoplasm
Fragmented	Infectious	Neurogenic
Fungating	Infective	Neuropathy
Gallstone	Infiltration	Nidus
Gangrene	Inflammation	Nodular
Giant cell	Invasion	Non-union
Granulation	Involucrum	Oblique fracture
Granuloma	Ischaemia	Occlusion
Greenstick fracture	Kyphosis	Oedema
Groove	Lacuna	Oligodontia
Gumma	Lesion	Oncogenesis
Gummatous	Livor mortis	Open fracture
Haematogenous	Luxation	Organisation
Haematoma	Lysis	Osteitis
Healing	Lytic lesion	Osteochondritis
Herniation	Malformation	Osteolysis
Howship's lacunae	Malignant	Osteopenia
Hypercalcaemia	Malignant neoplasm	Osteophyte
Hyperdontia	Malocclusion	Osteoporosis
Hyperostosis	Malunion	Pathogen
Hyperplasia	Metaplasia	Pathogenesis
Hypertrophy	Metastasis	Pathogenicity
Hypocalcaemia	Mixed dentition	Pathognomonic
Hypodontia	Multicentric	Pathological

## 9. PATHOLOGICAL (Continued)

Penetration	Recurrence	Strain
Perforation	Regeneration	Striation
Periodontal disease	Repair	Subluxation
Periosteal reaction	Resorption	Suppuration
Periostitis	Rhabdomyolysis	Suppurative
Phagocytosis	Rigor mortis	Swelling
Pitting	Sarcoma	Syndesmophyte
Plaque	Sclerosis	Thrombosis
Porosity	Scoliosis	Thrombus
Porous	Secondary	Torus
Primary	Sepsis	Trauma
Pseudoarthrosis	Sequestrum	Tumour
Puncture	Sharp force lesion	Valgus
Purulent	Spicule	Varus
Pus	Spiral fracture	Virulence
Pyogenesis	Splinter	
Pyogenic	Stenosis	

## 10. CLINICAL

Abortion	Craniotomy	Incubate
Acquired	Dentalgia	Incubation period
Acute	Diagnosis	Induced abortion
Aetiology	Diathesis	Infanticide
Amputation	Differential diagnosis	Infantile
Anaemia	Disease	Intrauterine
Anaesthesia	Dyskinesia	Latent
Analgesia	Ecdemic	Malady
Anoxia	Effusion	Miscarriage
Ante-mortem	Embolus	Monoparesis
Antenatal	Embryo	Monoplegia
Antepartum	Empyema	Morbidity
Antibiotic	Endemic	Mortality rate
Antiseptic	Epidemic	Myalgia
Arthralgia	Exarticulation	Neonatal
Ataxia	Febrile	Neuralgia
Autopsy	Fever	Odontalgia
Bacteraemia	Foetus	Olfactory
Bunion	Fulminating	Opportunistic microorganism
Cachexia	Gestation	Otalgia
Carcinogen	Haemorrhage	Palliative
Chronic	Healed	Pandemic
Clinical features	Hemiparesis	Paraesthesia
Coma	Hemiplegia	Paralysis
Communicable disease	Iatrogenic	Paresis
Comorbidity	Idiopathic	Parturition
Conception	Illness	Peri-mortem
Concussion	Immune	Perinatal
Congenital	Incidence	Physical sign
Contagious	Incision	

## 10. CLINICAL (Continued)

Post-mortem	Quiescent	Toxin
Postnatal	Relapse	Trepanation
Prenatal	Resolution	Trephination
Prevalence	Septicaemia	Ulcer
Prodromal	Stillbirth	Vaccine
Prognosis	Symptom	Zoonosis
Puerperium	Syndrome	
Quadriplegia	Toxaemia	

## 11. RADIOLOGICAL

Radiodensity	Radiopaque
Radiolucent	

## 12. TAPHONOMIC

Abrasion	Wear
Adipocere	Weathered
Bleach	Worn
Bore	
Butchering	
Charred	
Chewed	
Corroded	
Cracked	
Cremation	
Decay	
Decomposition	
Desiccate	
Diagenesis	
Discoloured	
Embalm	
Encrust	
Etch	
Excoriation	
Flake	
Fossilized	
Gnaw	
Mummification	
Polished	
Putrefaction	
Scored	
Scraped	
Scratch	
Stain	
Warp	